between the first and second courses to 23.9 weeks between the sixth and seventh courses. Subgroup analyses performed in 115 patients receiving rituximab in line with National Institute for Health and Care Excellence (NICE) guidance, i.e. after prior biologic therapy, demonstrated that dispensing frequency in this group did not differ markedly from the whole cohort. **CONCLUSIONS:** The findings of this analysis show that long-term rituximab use in the National Health Service differs from that assumed by NICE in previous appraisals of biologics in RA, with possible implications for future assessments of cost-effectiveness.

MUSCULAR-SKELETAL DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PMS91

ASSOCIATION OF MEDICATION PERSISTENCY WITH ROUTE OF ADMINISTRATION AND PATIENT COST-SHARING: ANALYSIS OF COMMONLY USED BIOLOGICS

Shim A[1], Pham H[1], Fairman K[2]

[1]*Hospira, Inc., Lake Forest, IL, USA,* [2]*Artemetrx Specialty Drug Solutions, Brentwood, TN, USA*

OBJECTIVES: To determine 12-month persistency rates for five commonly-used anti-inflammatory biologic agents and identify cost and patient characteristics associated with persistency. **METHODS:** Using an administrative claims database for >30 U.S. commercial health plans (9.2 million members), we identified patients aged ≥18 years who had ≥1 claim for a biologic anti-inflammatory agent (tocilizumab, certolizumab pegol, etanercept, adalimumab or infliximab) in 2012 or 2013 and were continuously enrolled for ≥15 months after the initial claim date. We determined rates of 12-month persistency overall and by drug, diagnostic indication, comorbidity count, route of drug administration, and copayment level. **RESULTS:** A total of 15,834 patients met study criteria. Twelve-month persistency rates were 70.7% among all patients and 51.5% among patients new to therapy. Persistency was highest for infliximab (82.3%), followed by adalimumab (66.1%), certolizumab pegol (65.5%), etanercept (65.1%), and tocilizumab (60.6%) (P<0.001). Higher persistency was observed for drugs administered intravenously (81.2%) versus subcutaneously (65.6%) (P<0.01). Persistency was higher in patients with Crohn's disease/ulcerative colitis (79.1%) than in patients with rheumatoid arthritis (67.0%) or psoriatic conditions (61.4%) (P<0.01) and was also higher in patients with no comorbidities than in those with 1 or ≥2 (P<0.01). Highest persistency was observed for patients with a mean plan copayment of $50 to <$100, followed by $0 to<$50, $100 to <$300, and ≥$300 (P<0.01). This trend was observed irrespective of intravenous or subcutaneous route of administration. **CONCLUSIONS:** Twelve-month persistency with anti-inflammatory biologic agents was highest in patients with Crohn's disease and lower in patients new to therapy and in those with comorbidities. Persistency was higher for drugs administered intravenously versus subcutaneously. Although the relationship between persistency and cost-sharing was not linear, copayments ≥$300 were associated with lowest persistency. Patient and plan characteristics should be considered in efforts to improve patient adherence to therapy.

PMS92

PRIMARY NON-ADHERENCE TO ANTIOSTEOPOROTIC TREATMENT AND ASSOCIATED FACTORS: A PROSPECTIVE COHORT STUDY IN SPAIN

Hurtado I[1], Sanfélix-Gimeno G[1], Peiró S[1], Sanfélix-Genovés J[2]

[1]*Center for Public Health Research (CSISP-FISABIO);Red de Investigación en Servicios de Salud en Enfermedades Crónicas, Valencia, Spain,* [2]*Center for Public Health Research (CSISP-FISABIO);Red de Investigación en Servicios de Salud en Enfermedades Crónicas;INCLIVA,Valencia, Spain, Valencia, Spain*

OBJECTIVES: Non-adherence to treatment represents an important public health problem. Little is known about the frequency with which patients fail to fill initial prescriptions ("primary non-adherence") and its predictors. Our aim was to estimate primary non-adherence to antiosteoporotic treatment and its associated factors. **METHODS:** Prospective cohort study comprising men and women ≥50 years (ESOSVAL cohort) who started antiosteoporotic treatment between 2009 and 2011. Data were obtained by linking diverse electronic health records of the Valencia region, which allows the differentiation between prescriptions (what the doctor prescribed) and dispensing (what the patient fills from the pharmacy) at individual level. A descriptive analysis was performed according to primary non-adherence and a multivariable logistic regression analysis to assess factors associated (patient characteristics and medication related covariates) with primary non-adherence. **RESULTS:** From 2260 treated patients of the ESOSVAL cohort 712 (31.5%) were new users. Of those, 80% were female, mean age 65.4 (64.7-66.1), 22.3% had previous osteoporotic fracture, and 22.2% had a 10-year risk of hip fracture ≥3. Most of the patients (84.1%) were treated with bisphosphonates. Regarding primary non-adherence, 6.5% of patients did not fill their first prescription at the pharmacy. These patients were more likely to be younger, to use medications that decrease bone mass, to have concomitant medications, to have high risk of hip fracture (assessed by FRAX), and hospitalizations in the last year. Factors independently associated with primary non-adherence were being over 65 years old (OR:0.29; CI95%:0.13;0.64) compared to the 50-65 year-old age stratum and polypharmacy (OR:0.45; CI95%: 0.24;0.86). **CONCLUSIONS:** Primary non-adherence was substantial although lower than that observed in other therapeutic areas. Very few characteristics were independently associated with primary non-adherence. Our findings suggest that those at higher risk for osteoporotic fracture and older were more likely to be non-adherent. Further research is needed regarding primary non-adherence predictors.

PMS93

AN ECONOMIC EVALUATION TO ASSESS THE COST EFFECTIVENESS OF THE NEW MEDICINE SERVICE IN IMPROVING ADHERENCE IN PEOPLE INITIATED ON NEW TREATMENT FOR GOUT

Brinkmann L[1], Elliott R[2], Tanajewski L[1]

[1]*University of Nottingham, Nottingham, England,* [2]*University of Nottingham, Nottingham, UK*

OBJECTIVES: The New Medicine Service (NMS) is a national community pharmacy service to support medicines-taking in people starting a new medicine for defined long-term conditions. The study investigated the expansion of NMS for patients with gout newly prescribed allopurinol as urate lowering therapy(ULT). Non-adherence with ULT is >60% in the UK **METHODS:** A probabilistic cost-effectiveness analysis from a NHS perspective was conducted to compare NMS (two follow-up consultations to identify and resolve medicines problems) with standard practice (SP) (usual supply without further follow-up).Treatment success was defined as patients reaching serum-uric-acid-levels <6mg/dL (sUA-controlled). A Markov model was developed to generate incremental cost-effectiveness ratios (ICER). Three health-states were included: sUA-controlled; sUA-uncontrolled; death. sUA-uncontrolled is associated with more acute gout attacks, higher mortality and is more likely in non-adherent patients. Cycle length was 1 year with a life-time horizon. Transition probabilities, resource use and utilities were derived from published studies. Costs and utilities were discounted at 3.5%. The results were plotted on an ICER-scatter-plane and presented as a cost-effectiveness acceptability curve (CEAC). **RESULTS:** mean (95% CI) cost per patient- NMS: £2569.43 (2203.69, 2935.17); SP: £2595.39 (2229.63, 2961.14) and mean (95% CI) QALYs generated per patient- NMS: 10.39 (10.10, 10.68) SP: 10.34(10.06,10.60) suggested that NMS dominated SP with increased QALYs (0.058 (-0.0008, 0.1168)) and reduced costs (-£25.96 (-81.37, 29.44). There was a 83.3% probability that NMS dominated SP and 98.4% probability that NMS was cost-effective at £20000 per QALY ceiling willingness-to-pay. **CONCLUSIONS:** NMS appears to be cost-effective when initiating ULT. It was assumed NMS would increase ULT adherence by 11% as in other diseases. NMS remained dominant down to an adherence increase of 5.4%. Reasons for ULT nonadherence matched the intervention design but further work is needed to assess the actual effectiveness of NMS in ULT.

PMS94

SYSTEMATIC REVIEW OF COMPLIANCE TO BISPHOSPHONATES IN PATIENTS WITH OSTEOPOROSIS IN RCT AND REAL PRACTICE

Dombrovskiy VS[1], Rebrova O[2]

[1]*The Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia,* [2]*Pirogov Russian National Research Medical University, Moscow, Russia*

BACKGROUND: Compliance to therapy is a widespread public health concern especially for chronic diseases, such as osteoporosis, as it is associated with increased morbidity and mortality due to fragility fractures. **OBJECTIVES:** To conduct the systematic review of clinical trials evaluating adherence to oral and parenteral bisphosphonates in patients with postmenopausal and senile osteoporosis. **METHODS:** We searched publications in PubMed and the Cochrane Library in November 2014. Studies of any design published in English were considered. The following criteria of medication adherence were taken into account: persistence rate (percentage of patients remaining on therapy at a given time). compliance rate (percentage of patients act in accordance with the prescribed interval and dose of a dosing regimen), medication possession ratio (proportion of doses dispensed in relation to doses prescribed), persistence (number of days from initiation to discontinuation of therapy). **RESULTS:** Thirty one publications were included (1 meta-analysis, 5 systematic reviews, 14 RCT, 7 prospective cohort studies, and 4 retrospective cohort studies). Original studies were heterogeneous in terms of drugs, treatment regimes, follow up periods, and measurements of adherence, so quantitative meta-analysis was not possible. The 12 months persistence rate for patients receiving oral bisphosphonates varies in the range of 16-78% in real practice and 54-88% in RCT. The persistence rate for parenteral bisphosphonates at 12 months was 86% in one real practice study, and 95% in one RCT. **CONCLUSIONS:** Methodology of evaluating compliance/adherence or persistence is heterogeneous among the studies of bisphosphonates treatment in patients with osteoporosis. Compliance and persistence with bisphosphonates are poor and suboptimal in real practice. The parenteral administration of bisphosphonates seems to have enhanced adherence when compared with oral bisphosphonates.

PMS95

MEDICATION-TAKING BEHAVIOUR IN WOMEN WITH POSTMENOPAUSAL OSTEOPOROSIS (OP) TREATED WITH DENOSUMAB OR MONTHLY ORAL BISPHOSPHONATES (OBPS)

Petranova T[1], Boyanov M[2], Shinkov A[3], Petkova R[4], Psachoulia E[5]

[1]*Clinic of Rheumatology, Medical University, Sofia, Bulgaria,* [2]*University Hospital Alexandrovska, Sofia, Bulgaria,* [3]*University Hospital of Endocrinology, Sofia, Bulgaria,* [4]*Amgen Bulgaria EOOD, Sofia, Bulgaria,* [5]*Amgen (Europe) GmbH, Zug, Switzerland*

OBJECTIVES: To describe treatment discontinuation among postmenopausal women initiating denosumab or monthly oBPs in routine clinical practice in Bulgaria. **METHODS:** This retrospective chart review, conducted in 12 Bulgarian endocrinology or rheumatology practices, included postmenopausal women ≥50 years old initiating denosumab or monthly oBPs between 1-Oct-2011 and 30-Sep-2012, followed up to 24 months after treatment initiation. For both denosumab and monthly oBPs, discontinuation date was taken from the patients' medical records (including any switch to another treatment/dosing regimen). If no such date was recorded, patients' were assumed to have continued on treatment. Denosumab persistence at 12, 18 and 24 months was defined as receiving the subsequent injection 6 months +60-days after the previous injection. Persistence to monthly oBPs could not be calculated. **RESULTS:** A total of 224 women initiating denosumab and 217 initiating monthly oBPs met the inclusion criteria. Of these, 57 (25%) initiating denosumab and 38 (18%) initiating monthly oBPs had experienced ≥1 prior OP fracture; 3 (1.3%) initiating denosumab and 8 (3.7%) initiating monthly oBPs experienced ≥1 OP fracture during the follow-up period. At treatment initiation, mean (SD) BMD T-scores for the denosumab and oBPs groups were -3.2 (±0.65) and -3.0 (±0.57) at the lumbar spine, -3.2 (±0.69) and -2.8 (±0.73) at the total hip and -2.6 (±0.71) and -2.4 (±0.77) at the femoral neck. Within the 24-month follow-up, 4.5% of women initiating denosumab and 56.2% initiating monthly oBPs discontinued treatment; median (interquartile range) time to discontinuation, 729.0 (728.3„Ÿ729.0) and 367.0 (354.0„Ÿ484.8) days, respectively. Denosumab persistence was 100%, 99.1% and 98.7% at 12, 18 and 24 months, respec-